

Appln No.: 10/081,817
Applicant(s): Kornelia Polyak et al.
IN-1 A TUMOR SUPPRESSOR GENE

ATGAAGCTGCCGCCCTCCGGGGCTCTGCGTGGCCCTGTCCCTGCAGCTCCGC
TCGTGCTTCTTAGTGGCTCGGCCAAGCCTGTGGCCAGCCTGCGCTGCGC
TGGAGTCGGCGGCGGAGGCCGGGCGGGACCCCTGGCCAACCCCCCTGGCA
CCCTCAACCCGCTGAAGCTCTGCTGAGCAGCCTGGCATCCCCGTGAACCA
CCTCATAGAGGGCTCCCAGAAGTGTGTGGCTGAGCTGGGTCCCCAGGCCGTG
GGGCCGTGAAGGCCCTGAAGGCCCTGCTGGGGCCCTGACAGTGTGTTGGC

FIG. 1A

CGTGCTTCTTAGTGGGCTGGCCAAGCCTGTGGCCAGCCTGCGCTGCCT
GGAGTCGGCGGCGGAGGCCGGGGCCGGACCTGGCAACCCCTCGGCAC
CCTCAACCCGCTGAAGCTCCTGCTGAGCAGCCTGGCATCCCCGTAAACCAC
CTCATAGAGGGCTCCAGAAGTGTGTGGCTGAGCTGGTCCCCAGGCCGTGG
GGGCCGTGAAGGCCCTGAAGGCCCTGCTGGGGCCCTGACAGTGTGGC

FIG. 1B

TTCTTAGTGGGCTCGGCCAAGCCTGTGGCCAGCCTGTCGCTGCGCTGGAGTC
GGCGCGGAGGCCGGGGCCGGACCTGGCCAACCCCTCGGCACCTCAAC
CCGCTGAAGCTCTGCTGAGCAGCCTGGCATCCCCGTGAACCACCTCATAG
AGGGCTCCCAGAAGTGTGGCTGAGCTGGTCCCCAGGCCGTGGGGCCGT
GAAGGCCCTGAAGGCCCTGCTGGGGCCCTGACAGTGTGGC

FIG. 1C

MKLAALLGLCVALSCSSARAFLVGSAKPVAQPVAALESAAEAGAGTLANPLGTL
NPLKLLLSSLGIPVNHLJEGSQKCVAELGPQAVGAVKALKALLGALTIVFG

FIG. 2A

RAFLVGSAKPVAQPVALESAAEAGAGTLANPLGTLNPLKLLLSSLGIPVNHLIE
GSOKCVAELGPQAVGAVKALKALLGALTVFG FIG. 2B

FIG. 2B

FLVGSAKPVQPVAALESAAEAGAGTLANPLGTLNPLKLLSSLGIPVNHLIEGS
OKCVAELGPQAVGAVKALKALLGALTFG

FIG. 2C

FIG. 2C

Appln No.: 10/081,817
 Appln. Ent(s): Kornelia Polyak et al.
 HIN TUMOR SUPPRESSOR GENE

ATGAAGCTTACCAACCACCTTCTAGTGCTCTGTGTGGCTCTGCTCAGTGACTC
 TGGTGTGCTTCTTCATGGACTCATTGCCAAGCCTGCAGTAGAACCCGTGG
 CCGCCCTGCTCCAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACC
 ATTAAGCCACTTGGCCATCCTGAGGTTCATCCTGGCCAGCATGGCATCCCAT
 TGGATCCTCTCATAGAGGGATCCAGGAAGTGTGTACCGAGCTGGCCCTGA
 GGCTGTAGGAGCTGTGAAGTCACTGCTGGGGTCCTGACAATGTTCGGT

FIG. 3A

GTTGCTTCTTCATGGACTCATTGCCAAGCCTGCAGTAGAACCCGTGGCCGC
 CCTTGCTCCAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACCATA
 AGCCACTTGGCCATCCTGAGGTTCATCCTGGCCAGCATGGCATCCCATTGG
 ATCCTCTCATAGAGGGATCCAGGAAGTGTGTACCGAGCTGGCCCTGAGGC
 TGTAGGAGCTGTGAAGTCACTGCTGGGGTCCTGACAATGTTCGGT

FIG. 3B

TTCTTCATGGACTCATTGCCAAGCCTGCAGTAGAACCCGTGGCCGCCTTGC
 TCCAGCTGCAGAGGCTGTGGCAGGGGCTGTGCCTAGCCTACCATAAGCCAC
 TTGGCCATCCTGAGGTTCATCCTGGCCAGCATGGCATCCCATTGGATCCTCT
 CATAGAGGGATCCAGGAAGTGTGTACCGAGCTGGCCCTGAGGCTGTAGGA
 GCTGTGAAGTCACTGCTGGGGTCCTGACAATGTTCGGT

FIG. 3C

MKLTTFLVLCVALLSDSGVAFFMDSLAKPAVEPVAALAPAAEAVAGAVPSLPL
 SHLAILRFILASMGIPLDPLIEGSRKCVTELGPPEAVGAVKSLLGVLTMFG

FIG. 4A

VAFFMDSLAKPAVEPVAALAPAAEAVAGAVPSLPLSHLAILRFILASMGIPLDPLI
 EGSRKCVTELGPPEAVGAVKSLLGVLTMFG

FIG. 4B

FFMDSLAKPAVEPVAALAPAAEAVAGAVPSLPLSHLAILRFILASMGIPLDPLIEG
 SRKCVTELGPPEAVGAVKSLLGVLTMFG

FIG. 4C

Appln No.: 10/081,817
Applicant(s): Kornelia Polyak et al.
Title: A TUMOR SUPPRESSOR GENE

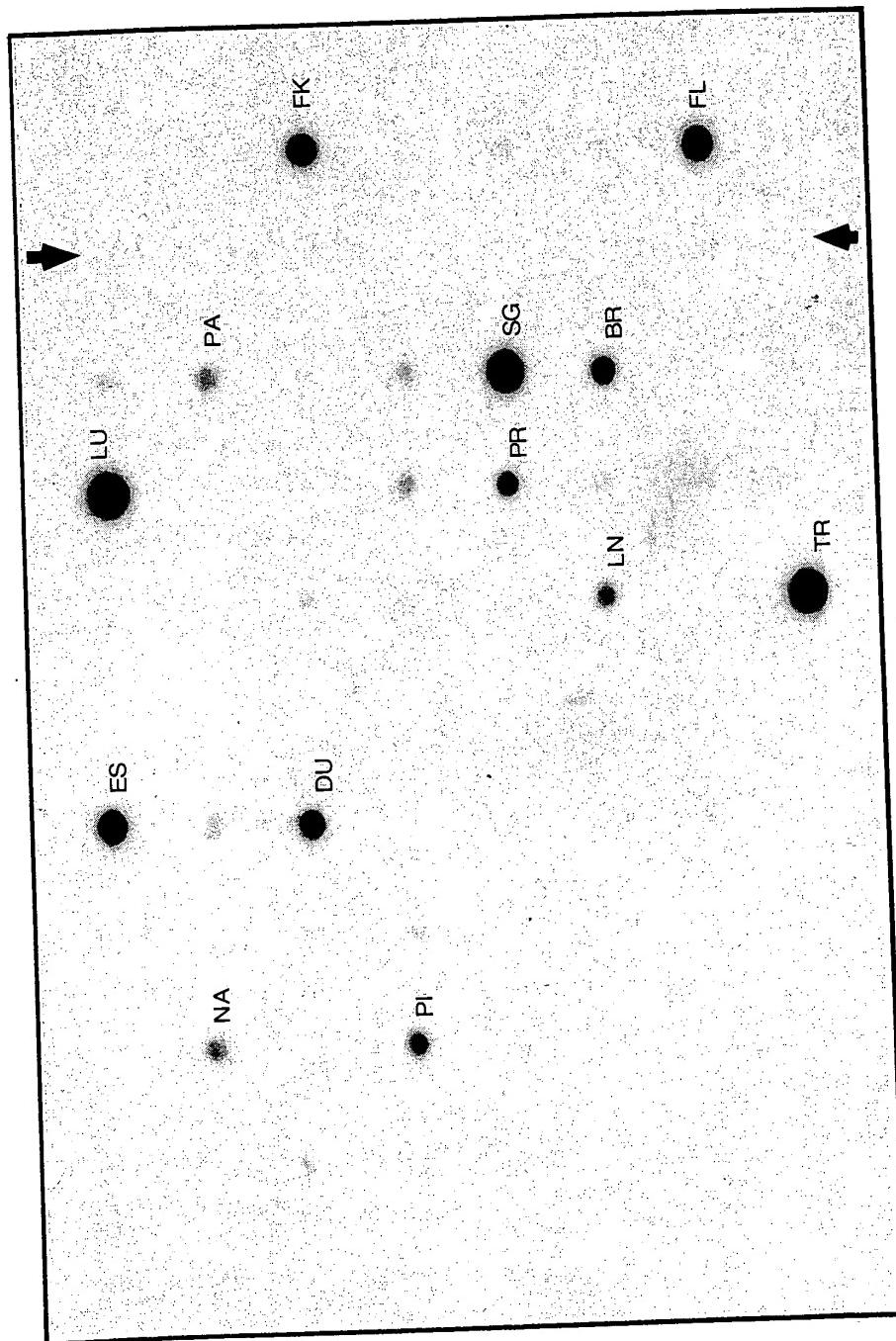


FIG. 5A

Appln No.: 10/081,817
Applicant(s): Kornelia Polyak et al.
HIN-1 A TUMOR SUPPRESSOR GENE

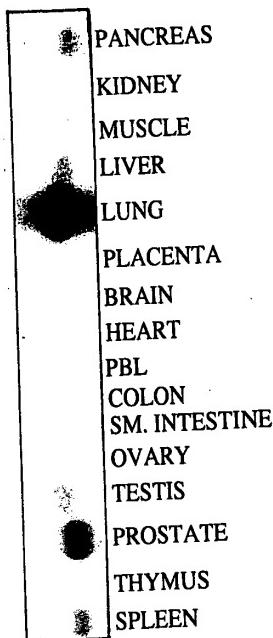


FIG. 5B



FIG. 5C

FIG. 5D

FIG. 5E

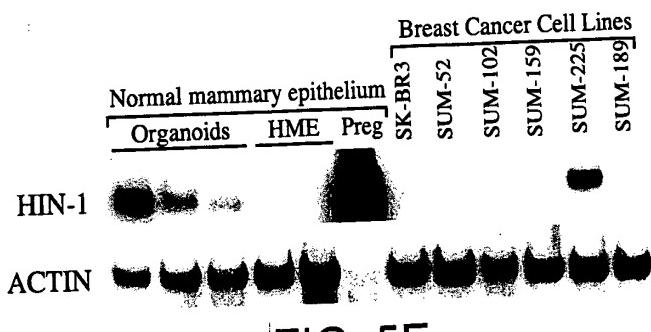
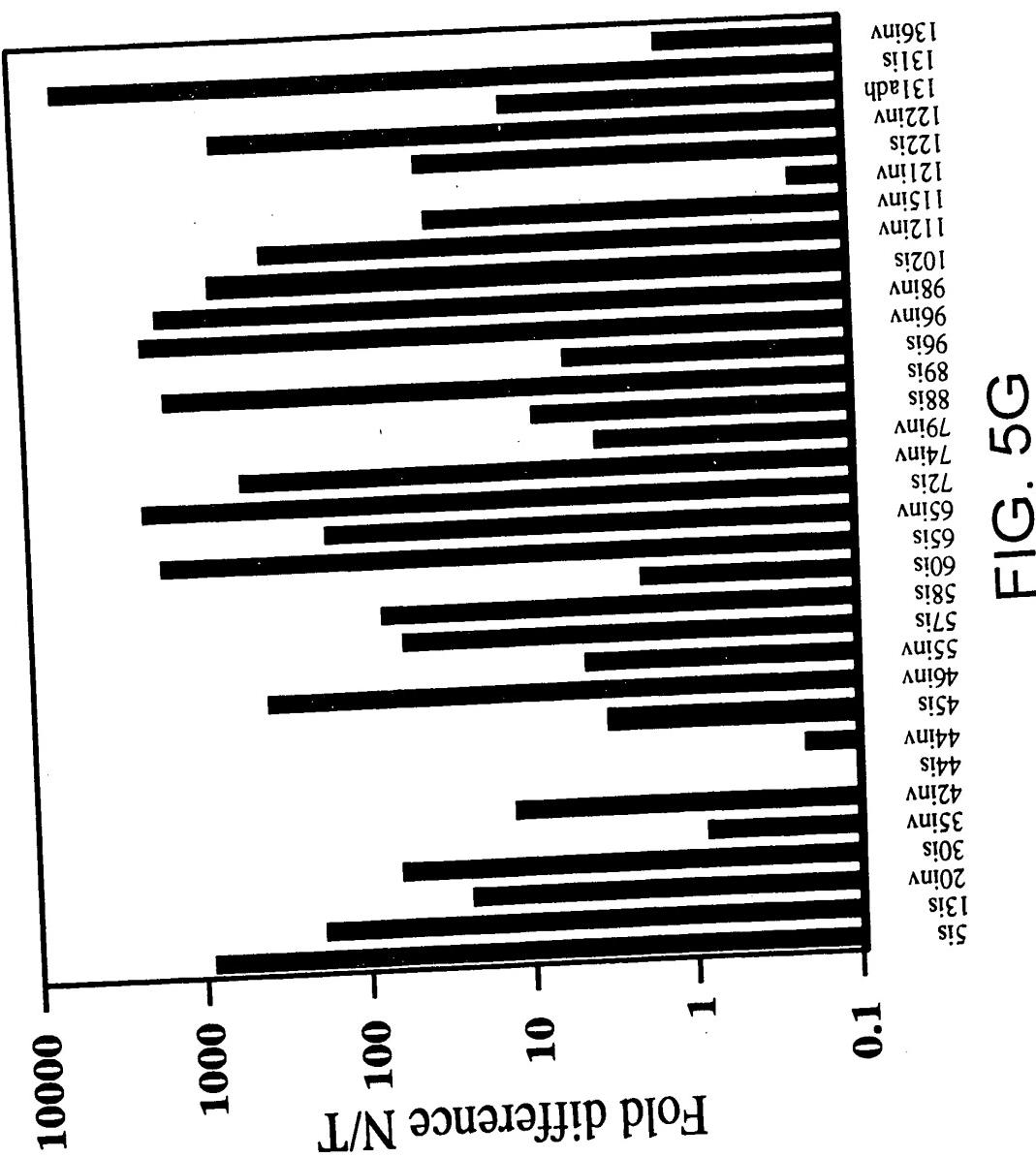


FIG. 5F



Appn No.: 10/081,817
 Applicant(s): Kornelia Polyak et al.
 HIN-1 TUMOR SUPPRESSOR GENE

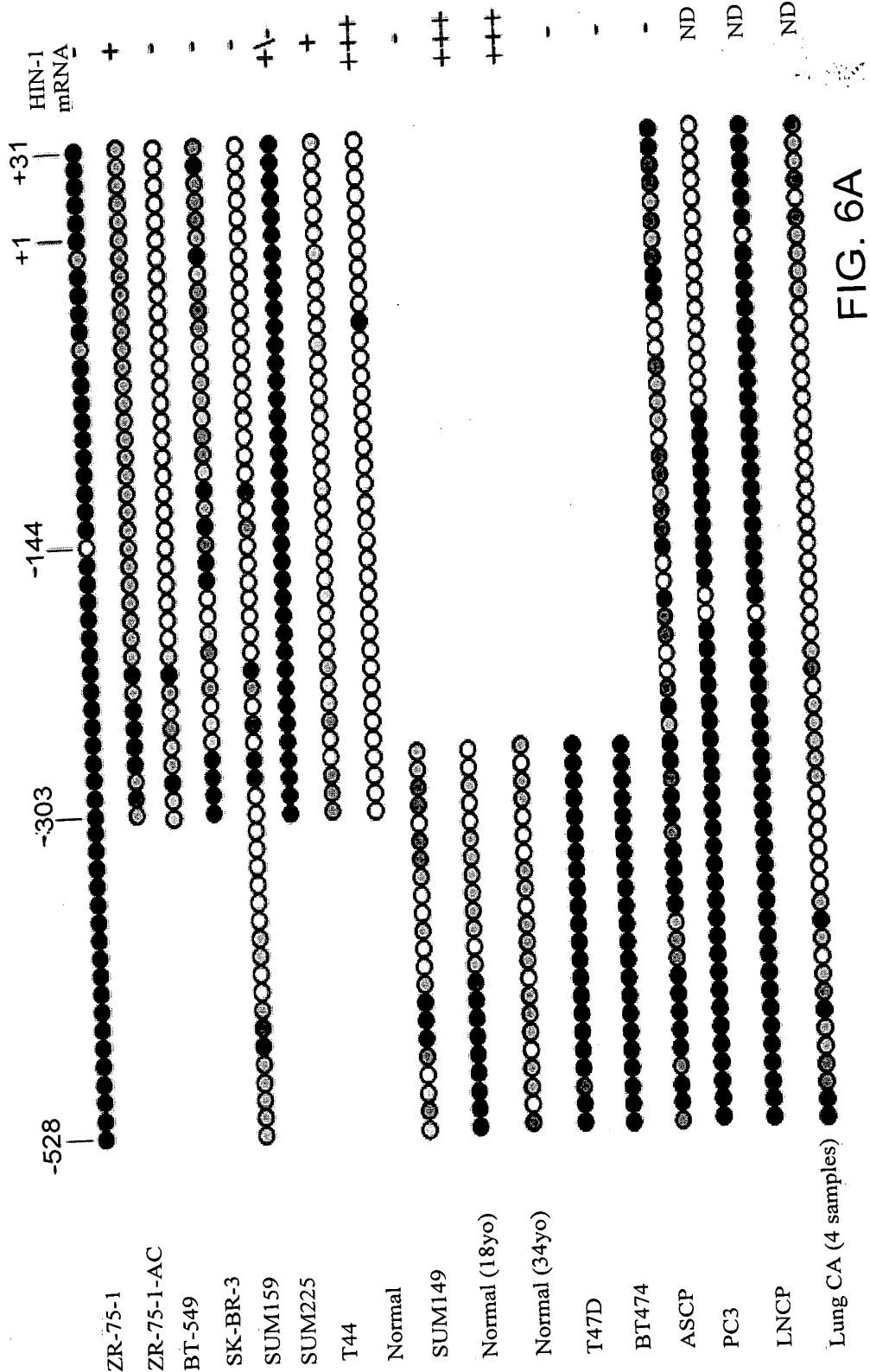


FIG. 6A

Appln No.: 10/081,817
Applicant(s): Kornelia Polyak et al.
HUMAN TUMOR SUPPRESSOR GENE

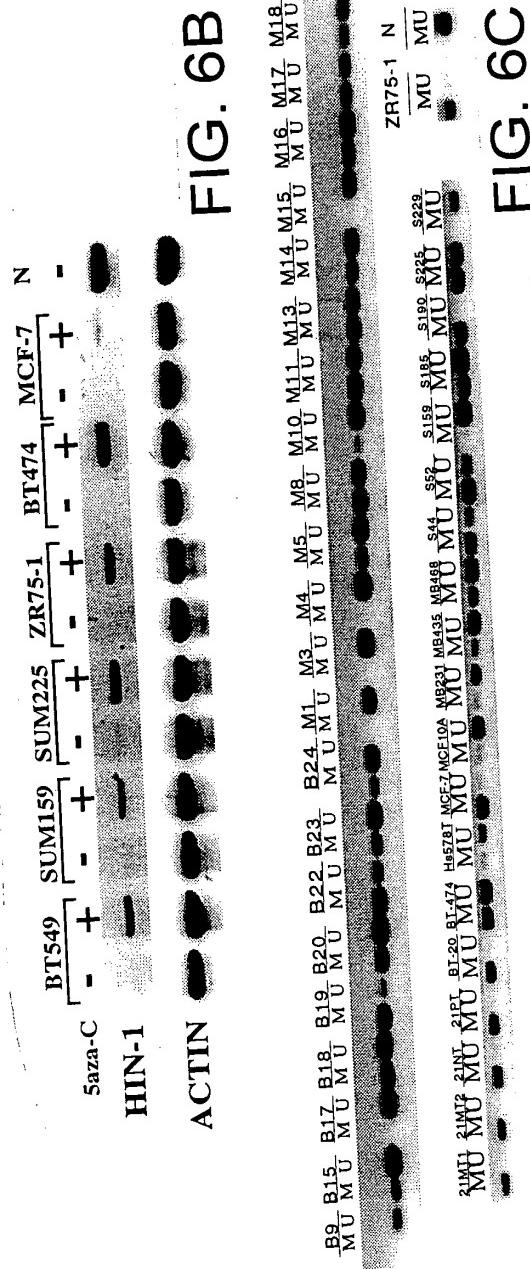


FIG. 6B

FIG. 6C

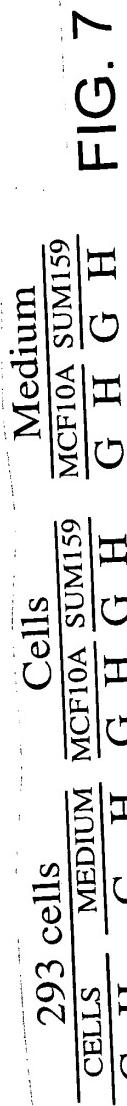


FIG. 7

Appln No.: 10/081,817
 Applicant(s): Kornelia Polyak et al.
 H- A TUMOR SUPPRESSOR GENE

CGGCCGGGAGGC GGCGCCGGAGTGAGGCCCTGATCGTCCCTGGCGCCTCCACC
 TCCCCAGGCGCAGAAGGCGCCACGAGGA CCCCAGTGCCCGACGTGCCCAC
 GGTCTGGGATCAGAGGCAGGGACCAGGGAGCCAGGA CTGCGCCGCCCCCG
 CCCCTGCCCTGGCGCAGGGAAAGCTCCCTCACCNAGGGAGCTCCCTCAC
 CGGGCCCAGCCCTGCAGGGGGCGCGTGGGTCA GACCGCAAAGCGAAGGT
 GCAGGGCCGGGGTGGGCCTCGCGAGACAAAGGCCGGCTGCCTCTCAGA
 GGGCCCAGCGCCTGCCAAGAGGAAGTCCTCGAGGCCGGCAGGAAGGG
 GGCACGGGCTTCCCAGGGCCGCCGGCAGCAGGAAGTTGGCCAGGGCA
 CGGCCGTGAGCGGAGCGGGCAGGGCTTCTCAGGAGCGCGGGCAGGCCGG
 CGCTGGAGGGCGAGGACCGGTATAAGAACGCTCGTGGCCTGCCGGC
 AGCCGCAGGTTCCCCCGCGCAGCCCCCGCGCC

FIG. 8

GTTCTCTGTTTGTGTTGGTAGGC GTTGCCTTGGTGGATTCACTGGCCAAG
 CCTGTGGTAGAACCGTGGCTGCCATTGCTACAGCTGCAGAGGCTGTGGCAG
 GGGCTGTGCCTAGCCTACCATTAAAGCCACTGGCCATCCTGAGGTTCATCGT
 ACCAGCCTGGCATCCCATTGGATCCTCTCATAGATGGTCCAGGAAGTGCCT
 CACCGAGCTGGCCCTGAGGCTGTAGGAGCTGTGAAGTCACTGCTGGGGCC
 CTGACAACGTTCGGT

FIG. 9A

VLCFVLVGVAFLVDSLAKPVVEPVAAIATAAEAVAGAVPSLPLSHLAILRFIVTSL
 GIPLDPLIDGSRKCVTELGP EAVGAVKSLLGALTTFG

FIG. 9B

TTCTTGGTGGATTCACTGGCCAAGCCTGTGGTAGAACCGTGGCTGCCATTGC
 TACAGCTGCAGAGGCTGTGGCAGGGCTGTGCCTAGCCTACCATTAAAGCCAC
 TTGGCCATCCTGAGGTTCATCGTGACCAGCCTGGCATCCCATTGGATCCTCT
 CATAGATGGTCCAGGAAGTGCCTACCGAGCTGGCCCTGAGGCTGTAGGA
 GCTGTGAAGTCACTGCTGGGGCCCTGACAACTGTTGGT

FIG. 9C

FLVDSLAKPVVEPVAAIATAAEAVAGAVPSLPLSHLAILRFIVTSLGIPLDPLIDGS
 RKCVTELGP EAVGAVKSLLGALTTFG

FIG. 9D

Appn No.: 10/081,817
 Applicant(s): Kornelia Polyak et al.
 , A TUMOR SUPPRESSOR GENE

Human HIN1	M K L A A - L	G L C V A L S C S S A R A F L V G
Mouse HIN1	M K L T T T F	V L C V A L L S D S G V A F F M D
Rat HIN-1	M K L . . .	V L C F V L V G - - - V A F L V D
		S V A F L . D
Human HIN1	S - A K P V A Q P V A A L E S A A E A G T L A	
Mouse HIN1	S L A K P A V E P V A A L A P A A E A V A G A V P	
Rat HIN-1	S L A K P V V E P V A A I A T A A E A V A G A V P	
	S L A K P V V E P V A A L A . A A E A V A G A V P	
Human HIN1	N - P L G T L N P I K L L S S L G I P V N H L I	
Mouse HIN1	S L P E S H L A I I R F I L A S M G I P E D P L I	
Rat HIN-1	S L P L S H L A I I L R F I L . S . G I P L D P L I	
	S L P L S H L A I I L R F I L . S . G I P L D P L I	
Human HIN1	E G S Q K C V A E L G P Q A V G A V K A L K A L E	
Mouse HIN1	E G S R K C V T E L G P E A V G A V K S - - - L L	
Rat HIN-1	D G S R K C V T E L G P E A V G A V K S - - - L L	
	E G S R K C V T E L G P E A V G A V K S L L	
Human HIN1	G A L T V F G	
Mouse HIN1	G V L T M F G	
Rat HIN-1	G A L T T F G	
	G A L T . F G	

FIG. 10

Appln No.: 10/081,817
Applicant(s): Kornelia Polyak et al.
HOT A TUMOR SUPPRESSOR GENE

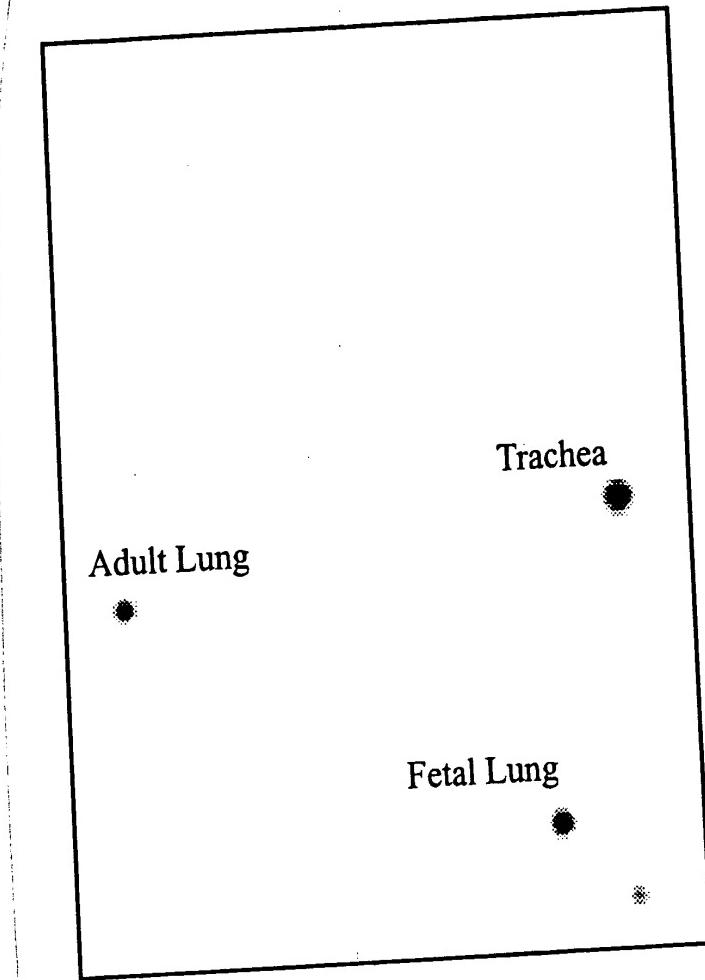


FIG. 11A

Appln No.: 10/081,817
 Applicant(s): Kornelia Polyak et al.
 -1, A TUMOR SUPPRESSOR GENE

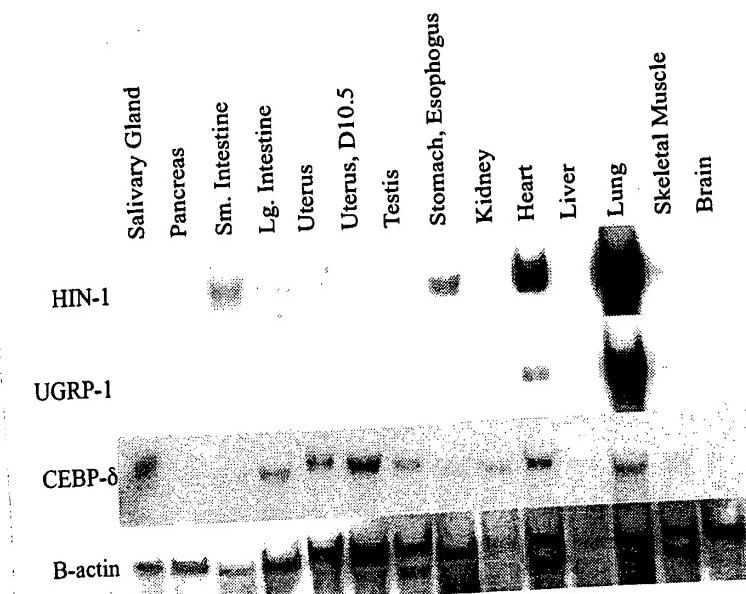


FIG. 11B

Organs, E 18.5

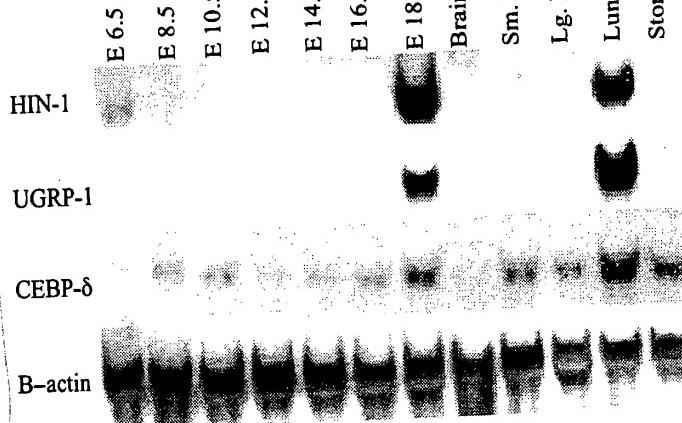
Whole Embryo, d.p.c.

FIG. 11C

Appn No.: 10/081,817
Applicant(s): Kornelia Polyak et al.
Title: A TUMOR SUPPRESSOR GENE

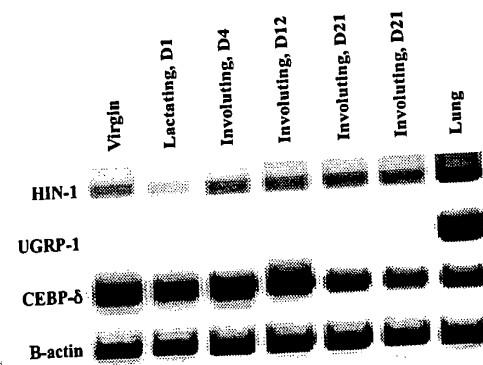


FIG. 11D

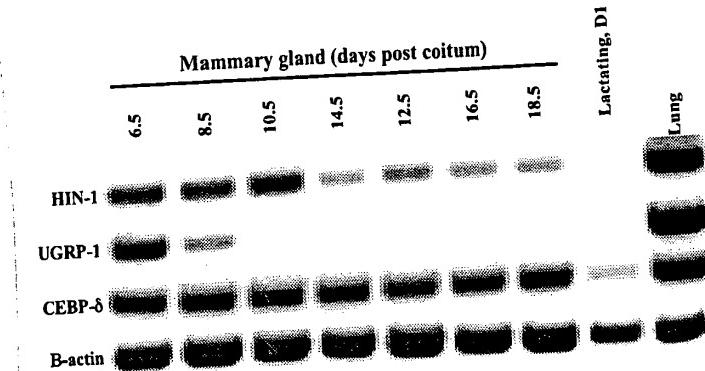


FIG. 11E

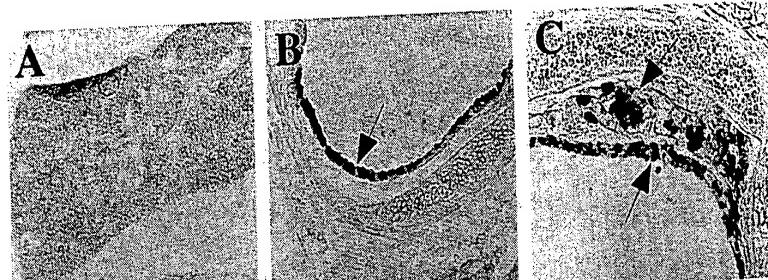


FIG. 12A

FIG. 12B

FIG. 12C

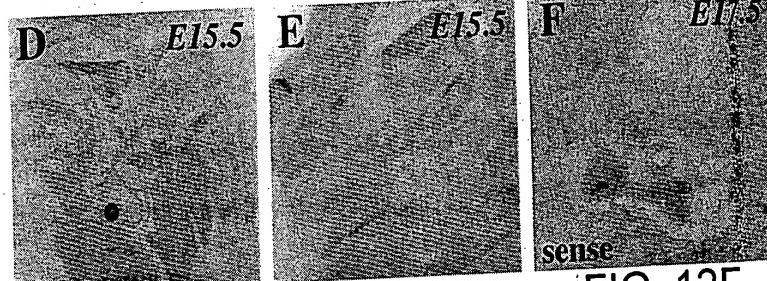


FIG. 12D

FIG. 12E

FIG. 12F

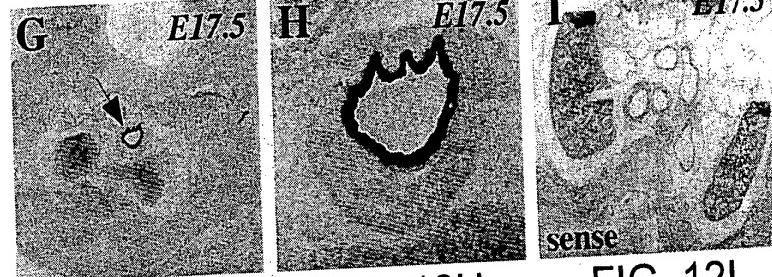


FIG. 12G

FIG. 12H

FIG. 12I

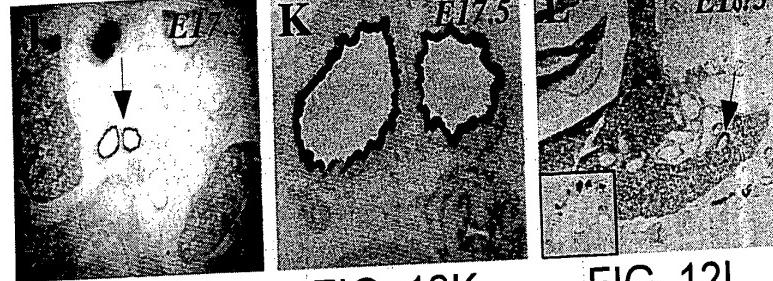


FIG. 12J

FIG. 12K

FIG. 12L

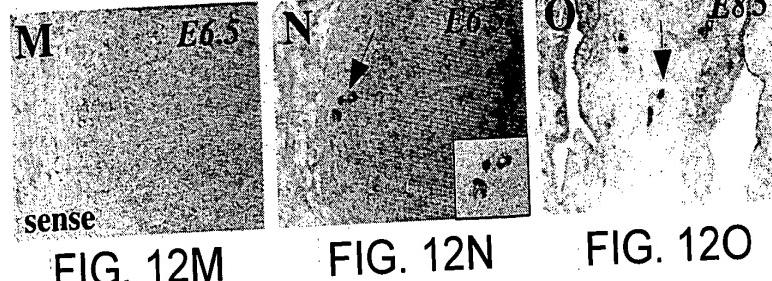


FIG. 12M

FIG. 12N

FIG. 12O

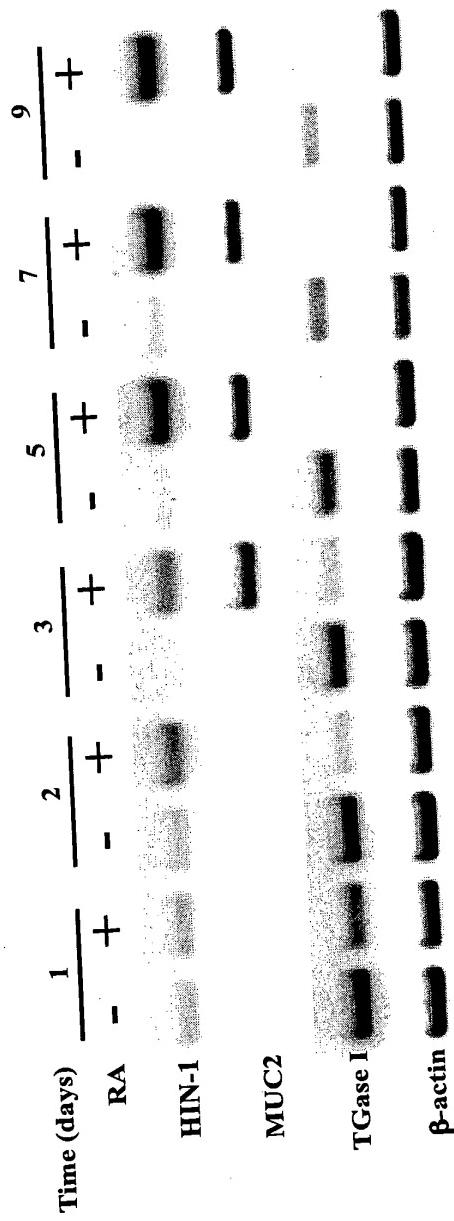


FIG. 13

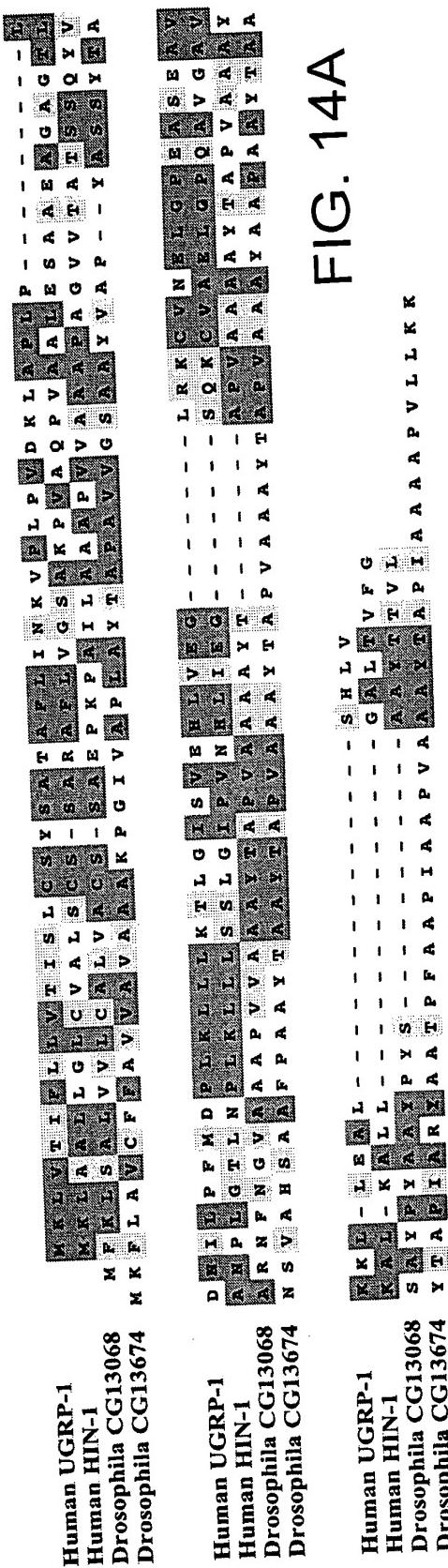


FIG. 14A

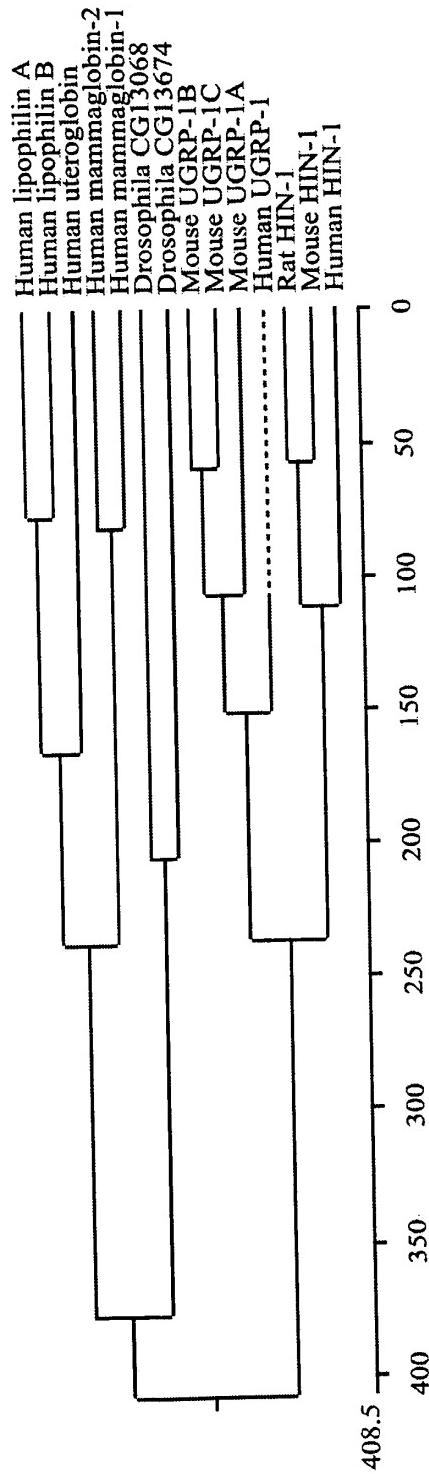


FIG. 14B

ATGTTCAAGCTGTCTGCCCTCGTGTCCCTGTGCCTCTGGTGGCCTGCTCCTCG
GCTGAGCCCCAAGCCCCGCTATCCTGGCCGCCGCTCCAGTGGTTGCAGCTGCTCC
TGCCGGCGTGGTCACCGCTACCAAGTTCGCAGTACGTGGCCCGCAACTTCAAC
GGTGTGGCTGCTGCTCCAGTTGCCGCTGCCTACACCGCTCCAGTTGCCGC
CGCTGCCTATACCGCTCCAGTTGCCGCCGCTGCTTATACCGCTCCAGTTGCCG
CTGCCTACTCTGCTTATCCGTATGCCGCTTACCCCTAACAGCGCTGCATACACC
ACTGTTTG

FIG. 15

ATGAAATTCCCTCGCCGTCTGCTTCTCGCTGTTGGCTGTGGCTGCTGCCAA
ACCCGGTATTGTGGCTCCTCTGGCCTACACCGCTCCGGCTGTGGTGGGAGTG
CCGCCTACGTGGCTCCCTACGCCCTCCAGCTACACCGCCAACTCGGTGGCCAC
AGCGCCGCCCTCCAGCTGCCTACACCGCCGCCTACACTGCTCCCGTTGCTGC
TGCCTATACCGCTCCAGTGGCTGCTGCTTATACCGCTCCAGTGGCCGCTGCGT
ACGCCGCCAGCTGCCTATACCGCTGCCTACACCGCCCCATTGCCGTTAT
GCCGCCACCCCTCGCAGCACCCATGCCGCTCCGTGGCTGCCCTACAC
CGCCCCCATGCCGCCAGTTGCTGAAGAAG

FIG. 16